

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-015022**Date Inspected:** 17-Jun-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1000**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1830**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

CWI Name:	Jim Cunningham and Jesse Cayabyab			CWI Present:	Yes	No	
Inspected CWI report:	Yes	No	N/A	Rod Oven in Use:	Yes	No	N/A
Electrode to specification:	Yes	No	N/A	Weld Procedures Followed:	Yes	No	N/A
Qualified Welders:	Yes	No	N/A	Verified Joint Fit-up:	Yes	No	N/A
Approved Drawings:	Yes	No	N/A	Approved WPS:	Yes	No	N/A
				Delayed / Cancelled:	Yes	No	N/A
Bridge No:	34-0006			Component:	Orthotropic Box Girder		

Summary of Items Observed:

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At OBG L5E/L6E edge plate 'B' outside, QA randomly observed welder Xiao Jian Wan welding cover pass on the splice butt joint. The welder was observed perform semi-automatic welding in the 3G (vertical) position utilizing a dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16" diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3040B-3. The joint being welded has a single V-groove butt joint with backing bar. The splice joint was preheated and maintained to greater than 200 degree Fahrenheit using Miller Proheat 35 Induction Heating System located on top of the plate prior welding. ABF Quality Control (QC) Jesse Cayabyab was noted monitoring the welding parameters of the welder. QA also performed verification on the parameter and noted readings of 245 Amperes, 21.7 voltages and 200mm per minute travel speed which appear acceptable to contract requirements. At the end of the shift, the welder has completed welding the whole length of the splice joint and held the preheat maintenance of more than 200 degree Fahrenheit for three hours as required.

QA randomly observed ABF/JV qualified welder Mitch Sittinger perform CJP groove (splice) back welding fill pass on Orthotropic Box Girder (OBG) L3E/L4E plate 'D' outside. The welder was observed welding in the 4G (overhead) position utilizing a dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16" diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3040A-4. The welder was using a track mounted welder holder assembly that is remotely

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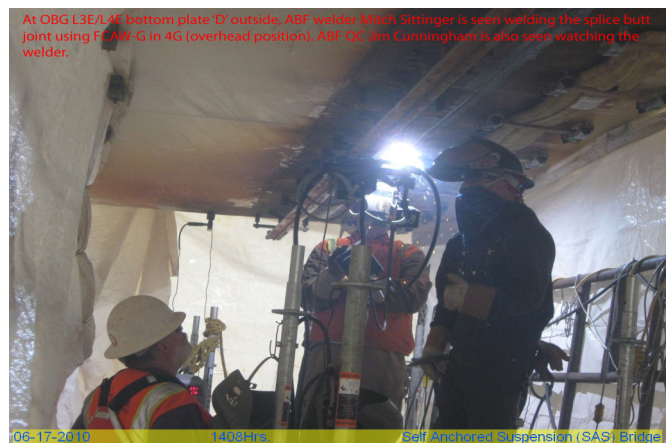
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controlled. The joint being welded has the backing bar gouged using the Esab Plasma Arc machine and was ground smooth. The splice joint was preheated to greater than 150 degree Fahrenheit prior welding and the vicinity was properly protected from wind and other weather conditions. During welding, ABF Quality Control (QC) Jim Cunningham was noted monitoring the welder and his welding parameters.

At OBG L4E/L5E side plate 'C' inside, QA randomly observed ABF/JV qualified welder Sungtao, Huang ID # 3794 perform CJP groove (splice) welding fill to cover pass. The welder was observed perform automatic welding in the 3G (vertical) position utilizing a dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16" diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3042A-1. The joint being welded has a single V-groove butt joint with backing bar. The splice joint was preheated and maintained to greater than 200 degree Fahrenheit using Miller Proheat 35 Induction Heating System located at the opposite side of the plate prior/during welding. During welding, ABF Quality Control (QC) Bernie Docena was noted monitoring the welding parameters of the welder. QA also performed verification on the parameter and noted readings of 245 Amperes, 23.0 voltages and 300mm per minute travel speed which appear acceptable to contract requirements.

At OBG L5E/L6E side plate 'E' outside, QA randomly observed ABF welder Rick Clayborn tack welding fitting gear/temporary attachment. The welder was welding in 4F (overhead) position using 1/8" diameter E7018H4R electrode. QA noted ABF QC Bonifacio Daquinag monitoring the welder and his parameter. During the shift, welding of the fitting gear/temporary attachment was completed and the backing bar was also put in place. After installing the backing bar, ABF QC went inside the box and checked the alignment. QC informed QA that during the initial measurements of the alignment he was getting 4.0mm and 3.0mm misalignment on some areas which he said still need more adjustment.

At L2W/L3W side plates 'E' outside, this QA performed 10% Magnetic Particle Testing (MT) on the flush ground weld cover reinforcement of the splice butt joint. QA used a Parker Contour Probe electromagnetic yoke with red magnetic powder as detecting media. QA found no significant indications during the test.



Summary of Conversations:

As stated above.

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Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Mohammad Fatemi (916) 227-5298, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo, Joselito
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Quality Assurance Inspector

Reviewed By:	Levell, Bill
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QA Reviewer
